

I CLAIM:

1. A system for separating liquid and solid waste from a conveying air stream comprising:

a removable primary waste barrel having filter media for separating solid waste from liquid;

5 a separation stack detachably mounted above the primary waste barrel to allow removal of the primary waste barrel, said separation stack having an inlet directing an air stream with entrained liquid and solid waste downward into the primary waste barrel;

10 a drain pump for removing liquid accumulating in the primary waste barrel;

a secondary waste barrel; and

a vacuum chamber directing the air stream from the separation stack downward into the secondary waste barrel to remove entrained droplets of moisture.

2. The system of claim 1 wherein the primary waste barrel further comprises a perforated drain plate spaced above the bottom of the primary waste barrel to support the filter media.

3. The system of claim 1 wherein the primary waste barrel further comprises a perforated drain board surrounding the filter media around the interior surface of the primary waste barrel.

4. The system of claim 3 wherein the perforated drain board further comprises protrusions maintaining a separation for drainage of liquid within the primary waste barrel.

5. The system of claim 1 wherein the primary waste barrel further comprises a stand pipe extending upward within the primary waste barrel to allow liquid to be withdrawn from the bottom of the primary waste barrel.

6. The system of claim 5 wherein the separation stack further comprises a stinger tube removably insertable through the stand pipe and extending into the liquid collecting in the bottom of the primary waste barrel.

7. The system of claim 1 wherein the vacuum chamber further comprises a moisture separator.

8. The system of claim 1 wherein the vacuum chamber further comprises an air filter.

9. The system of claim 1 wherein the primary waste barrel has an upper opening and wherein the separation stack removably covers the upper opening of the primary waste barrel.

10. The system of claim 1 wherein the primary waste barrel further comprises a liner.

11. A system for separating liquid and solid waste from a conveying air stream comprising:

a removable primary waste barrel having:

(a) a perforated drain plate spaced above the bottom of the primary waste barrel;

(b) filter media supported by the perforated drain plate to separate solid waste from liquid collecting in the primary waste barrel;

10 (c) a perforated drain board surrounding the filter media around the interior surface of the primary waste barrel, allowing liquid to drain into the bottom of the primary waste barrel; and

(d) a stand pipe extending upward within the primary waste barrel to allow liquid to be withdrawn from the bottom of the primary waste barrel;

15 a separation stack detachably mounted above the primary waste barrel to allow removal of the primary waste barrel, said separation stack having:

(a) an inlet directing an air stream with entrained liquid and solid waste downward into the primary waste barrel; and

20 (b) a stinger tube removably insertable through the stand pipe and extending into the liquid collecting in the bottom of the primary waste barrel; and

a drain pump for removing liquid accumulating at the bottom of the primary waste barrel through the stinger tube inserted through the stand pipe.

12. The system of claim 11 wherein the perforated drain board surrounds the filter media and further comprises protrusions maintaining a separation for drainage of liquid within the primary waste barrel.

13. The system of claim 11 further comprising an air filter filtering the air stream exiting the separation stack.

14. The system of claim 11 wherein the primary waste barrel has an upper opening and wherein the separation stack removably covers the upper opening of the primary waste barrel.

15. The system of claim 11 further comprising:
a secondary waste barrel; and
a vacuum chamber directing the air stream from the separation
stack downward into the secondary waste barrel to remove any
entrained droplets of moisture.

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16. The system of claim 11 wherein the primary waste barrel
further comprises a liner.

17. A system for separating liquid and solid waste from a conveying
air stream comprising:

a removable primary waste barrel having filter media for
separating solid waste from liquid;

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a separation stack detachably mounted above the primary
waste barrel to allow removal of the primary waste barrel, said
separation stack having an inlet directing an air stream with entrained
liquid and solid waste downward into the primary waste barrel;

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a drain pump for removing liquid accumulating in the primary
waste barrel;

a secondary waste barrel; and

a vacuum chamber mounted above the secondary waste barrel
having:

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(a) an inlet directing the air stream from the separation stack
downward into the secondary waste barrel to remove entrained
droplets of moisture;

(b) a moisture separator removing moisture for the gas
stream exiting the secondary waste barrel; and

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(c) an air filter removing particulates from the gas stream
exiting the secondary waste barrel.

18. The system of claim 17 wherein the primary waste barrel further comprises a perforated drain plate spaced above the bottom of the primary waste barrel to support the filter media.

19. The system of claim 17 wherein the primary waste barrel further comprises a perforated drain board surrounding the filter media around the interior surface of the primary waste barrel.

20. The system of claim 19 wherein the perforated drain board further comprises protrusions maintaining a separation for drainage of liquid within the primary waste barrel.

21. The system of claim 17 wherein the primary waste barrel further comprises a stand pipe extending upward within the primary waste barrel to allow liquid to be withdrawn from the bottom of the primary waste barrel.

22. The system of claim 21 wherein the separation stack further comprises a stinger tube removably insertable through the stand pipe and extending into the liquid collecting in the bottom of the primary waste barrel.